



[11] Patent Number: 6,033,451

[45] **Date of Patent:** Mar. 7, 2000

- 7/1993 Uibel et al. .

- 5,226,941 7/1993 Uibel et al. .

- 5,230,724 7/1993 Marafante et al. .

- 5,464,460 11/1995 Bosses .

- 5,544,385 8/1996 Jailor et al. .... 55/376

- 5,688,298 11/1997 Bosses .

- 5,820,643 10/1998 Lienenluke et al. .... 55/376

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- [57]
- ABSTRACT**

- 55/378; 55/DIG. 2; 15/350; 15/351

- [58] Field of Search ..... 55/374, 376, 377,  
55/378, 382, DIG. 2; 15/350, 351

For use with vacuum cleaner bags of the type having a substantially rigid collar surrounding the bag opening, and with vacuum cleaners of the type having a dirty air outlet nozzle, a vacuum bag docking assembly is shown and described. The assembly incorporates an anchor member having a central opening for closely receiving the dirty air outlet nozzle. The assembly also incorporates a mounting member which engages the collar on the vacuum bag to secure the bag to the bag mounting member. The bag mounting member is pivotally connected to the anchor member, and moves between a loading position in which the bag can be inserted or removed from the mounting member, and a working position in which the bag opening engages the dirty air outlet nozzle.

## U.S. PATENT DOCUMENTS

- 4,381,192 4/1983 Grimard ..... 55/376

- 4,539,026 9/1985 Kuplas .

- 4,591,369 5/1986 Stewart, Sr. et al. .

- 4,678,486 7/1987 Jacob et al. .

- 4,738,697 4/1988 Westergren .

- 5,028,245 7/1991 Stein et al. .

- |           |         |          |
|-----------|---------|----------|
| 5,064,455 | 11/1991 | Lackner. |
| 5,082,333 | 2/1992  | H.       |

- 5,089,038 2/1992 Kopco et al. .

**14 Claims, 6 Drawing Sheets**

